

IN THE CLAIMS

The following is a complete listing of revised claims with a status identifier in parenthesis.

LISTING OF CLAIMS

1. (Currently Amended) A method of delivering video via an ATM-based [[a]] switched communication network comprising:
 - transmitting one or more program streams encapsulated in Internet Protocol (IP) packets from a head end node to one or more egress nodes via the switched network; and
 - inserting one or more advertisements into the one or more program streams at the one or more egress nodes for delivery to individual subscribers such that a particular subscriber receives a program stream with an advertisement that corresponds to demographic characteristics of that particular subscriber.
2. (Original) The method according to claim 1, further comprising the step of inserting splice points in the one or more program streams at the head end node.
3. (Original) The method according to claim 2, wherein inserting one or more advertisements comprises splicing an advertising stream with a program stream, wherein the advertising stream includes the one or more advertisements.

4. (Original) The method according to claim 3, wherein the step of splicing further comprises:

responsive to a command to begin splicing, identifying a splice point in the advertising stream;

buffering frames after the splice point in the advertising stream;

identifying a splice point in the program stream;

switching to the advertising stream; and

outputting an ad-inserted stream that includes frames from the program stream and advertising stream,

whereby the program stream and advertising stream are adaptively synchronized by aligning the splice points to enhance the quality of video transmission.

5. (Original) The method according to claim 1, wherein N program streams are transmitted via the switched communication network and wherein $N \times M$ ad-inserted streams are created at the one or more egress nodes, where N and M are integers and where M represents the number of demographic groupings of the individual subscribers.

6. (Cancelled).

7. (Currently Amended) The method according to claim 1 [[6]], wherein the step of transmitting comprises multicasting the program streams via the switched communication network.

8. (Original) The method according to claim 7, further comprising the step of transmitting the ad-inserted streams to subscribers via a digital subscriber line (DSL) interface.

9. (Original) The method according to claim 7, further comprising the step of transmitting the ad-inserted streams to subscribers via an Ethernet interface.

10. (Original) The method according to claim 1, wherein the program streams supplied by the head end node include program streams provided to the head end node from a remote source and program streams provided to the head end node from a local source.

11. (Previously Presented) The method according to claim 1, wherein the step of inserting one or more advertisements includes:

receiving subscriber management information; and
selecting a particular advertisement based on the subscriber management information; and
retrieving the particular advertisement at the one or more egress nodes.

12. (Currently Amended) In a video distribution network including a head end node, one or more egress nodes, a service management system, and [[a]] an ATM-based switched communication network, wherein the head end node supplies one or more program streams encapsulated in Internet Protocol (IP) packets via the switched communication network to the one or more egress nodes, a system for delivering video comprising:

at an egress node,

a router for receiving the one or more program streams,

a storage element for storing advertisements, and

a splicer element for inserting one or more of the stored advertisements into the one or more program streams for delivery to individual subscribers,

wherein a particular subscriber receives a program stream with an advertisement that corresponds to demographic characteristics of that particular subscriber.

13. (Original) The system according to claim 12, wherein the one or more program streams include splice points and wherein the splicer element splices an advertising stream with a program stream, wherein the advertising stream includes one or more stored advertisements.

14. (Original) The system according to claim 13, wherein the splicer element comprises:

a plurality of input processors, one of the plurality of input processors receiving the program stream and another of the plurality of input processors receiving the advertising stream;

a plurality of data buffers, each of the plurality of data buffers coupled to a corresponding one of the plurality of input processors; and

at least one output processor coupled to the plurality of data buffers, wherein, responsive to a splice point being identified in the advertising stream, one of the plurality of data buffers stores frames after the splice point in the advertising stream, and wherein, responsive to a splice point being identified in the program stream, the at least one output processor switches to the advertising stream so that a single bitstream is provided as output that includes frames from the program stream and advertising stream.

15. (Original) The system according to claim 12, wherein N program streams are distributed via the switched communication network and wherein $N \times M$ ad-inserted streams are created at the egress node, where N and M are integers and where M represents the number of demographic groupings of the individual subscribers.

16. (Cancelled).

17. (Currently Amended) The system according to claim 12 [[16]], wherein the program streams are distributed via multicasting in the switched communication network.

18. (Original) The system according to claim 17, wherein the ad-inserted streams are distributed to subscribers via an interface selected from the group consisting of a digital subscriber line (DSL) interface and an Ethernet interface.

19. (Original) The system according to claim 12, wherein the service management system provides subscriber management information to the egress node and, responsible to the subscriber management information, the egress node selects and retrieves a particular advertisement from the storage element based on the subscriber management information.

20. (Currently Amended) A system for delivering video via [[a]] an ATM-based switched communication network comprising:

a head end node for transmitting one or more program streams encapsulated in Internet Protocol (IP) packets via the switched network; and

at least one egress node for receiving the one or more program streams, the egress node including a splicer element for inserting one or more advertisements into the one or more program streams at the egress node for delivery to individual subscribers, such that a particular subscriber receives a program stream with an advertisement that corresponds to demographic characteristics of that particular subscriber.

21. (Original) The system according to claim 20, wherein the head end node comprises:

an encoder for receiving and encoding the program streams;
an encapsulator for converting the encoded program streams into a format for transmission via the switched communication network; and
a service management system in communication with the encoder, the encapsulator and the switched communication network for provisioning and managing distribution of video and demographically-targeted advertising.

22. (Original) The system according to claim 21, wherein the head end node further comprises a storage element for storing encoded program streams for time-delayed delivery.